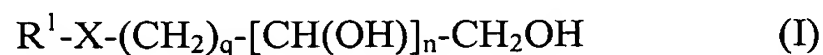


AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A polishing liquid composition for polishing a surface to be polished comprising an insulating layer and a metal layer, the polishing liquid composition comprising a compound having six or more carbon atoms and a structure in which each of two or more adjacent carbon atoms has a hydroxyl group in a molecule, and water, wherein the compound having a structure in which each of two or more adjacent carbon atoms has a hydroxyl group in a molecule is represented by the formula (I):



wherein

R^1 is a hydrocarbon group having 1 to 24 carbon atoms;

X is a group represented by

$(CH_2)_m$, wherein m is 1,

oxygen atom,

sulfur atom,

COO group,

OCO group,

a group represented by NR^2 or

$O(R^2O)P(O)O$, wherein R^2 is hydrogen atom or a hydrocarbon group having 1

to 24 carbon atoms;

q is 0 or 1; and

n is an integer of 1 to 4.

Claim 2 (Original): The polishing liquid composition according to claim 1, further comprising an organic acid.

Claim 3 (Original): The polishing liquid composition according to claim 2, wherein the organic acid is an etching agent.

Claim 4 (Original): The polishing liquid composition according to claim 1, further comprising an etching agent comprising an inorganic acid.

Claims 5-6 (Canceled)

Claim 7 (Previously Presented): The polishing liquid composition according to Claim 1, further comprising an oxidizing agent, an abrasive or a mixture thereof.

Claim 8 (Canceled)

Claim 9 (Previously Presented): A method of using a polishing liquid composition, the method comprising polishing a surface using the polishing liquid composition of Claim 1.

Claim 10 (Canceled)

Claim 11 (Previously Presented): The polishing liquid composition according to claim 2, further comprising an oxidizing agent, an abrasive or a mixture thereof.

Claims 12-13 (Canceled)

Claim 14 (Previously Presented): A method of using a polishing liquid composition, the method comprising polishing a surface using the polishing liquid composition of claim 2.

Claim 15 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer including copper or copper alloys using ~~the~~ a polishing liquid composition of claim 5 comprising

an aliphatic carboxylic acid having 7 to 10 carbon atoms and/or a salt thereof;

an etching agent comprising an organic acid; and

water, wherein

the organic acid of the etching agent is at least one selected from the group consisting of

A: aliphatic organic acids having 6 or less carbon atoms and one to three carboxyl groups;

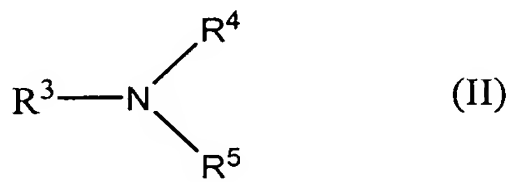
B: aromatic organic acids having 7 to 10 carbon atoms and one to four carboxyl groups;

C: organic acids having 6 or less carbon atoms and one to four phosphonic groups; and

D: polyaminocarboxylic acids having in a molecule two or more structures represented by the formula (III):



Claim 16 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer using the a polishing liquid composition ~~of claim 6~~ comprising an amine compound represented by the following general formula (II):



wherein

R³ is a linear or branched alkyl group having 4 to 18 carbon atoms,

a linear or branched alkenyl group having 4 to 18 carbon atoms,

an aryl group having 6 to 18 carbon atoms, and

an aralkyl group having 7 to 18 carbon atoms;

each of R⁴ and R⁵, which may be identical or different, is

a linear alkyl group having 1 to 8 carbon atoms or

a branched alkyl group having 3 to 8 carbon atoms, or

a group represented by H-(OR⁶)_Z-, wherein R⁶ is a linear alkylene

group having 1 to 3 carbon atoms, or

a branched alkylene group having 3 carbon atoms; and

Z is a number of 1 to 20, and/or a salt thereof,

an etching agent,

an oxidizing agent, and

water.

Claim 17 (Previously Presented): A method of using a polishing liquid composition, the method comprising polishing a surface using the polishing liquid composition of claim 7.

Claim 18 (Previously Presented): A method of using a polishing liquid composition, the method comprising polishing a surface using the polishing liquid composition of claim 11.

Claim 19 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer including copper or copper alloys using ~~the~~ a polishing liquid composition ~~of claim 12~~ comprising

an aliphatic carboxylic acid having 7 to 10 carbon atoms and/or a salt thereof;

an etching agent comprising an organic acid;

at least one of an oxidizing agent and an abrasive; and

water, wherein

the organic acid of the etching agent is at least one selected from the group consisting of

A: aliphatic organic acids having 6 or less carbon atoms and one to three carboxyl groups;

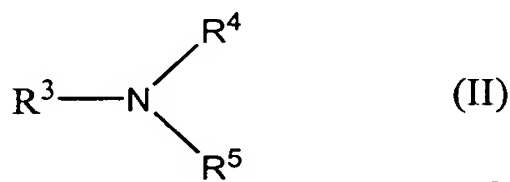
B: aromatic organic acids having 7 to 10 carbon atoms and one to four carboxyl groups;

C: organic acids having 6 or less carbon atoms and one to four phosphonic groups; and

D: polyaminocarboxylic acids having in a molecule two or more structures represented by the formula (III):



Claim 20 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer using ~~the~~ a polishing liquid composition ~~of claim 13~~ comprising
an amine compound represented by the following general formula (II):



wherein

R³ is a linear or branched alkyl group having 4 to 18 carbon atoms,

a linear or branched alkenyl group having 4 to 18 carbon atoms,

an aryl group having 6 to 18 carbon atoms, and

an aralkyl group having 7 to 18 carbon atoms;

each of R⁴ and R⁵, which may be identical or different, is

a linear alkyl group having 1 to 8 carbon atoms or

a branched alkyl group having 3 to 8 carbon atoms, or

a group represented by H-(OR⁶)_Z-, wherein R⁶ is a linear alkylene

group having 1 to 3 carbon atoms, or

a branched alkylene group having 3 carbon atoms; and

Z is a number of 1 to 20, and/or a salt thereof,

an etching agent,

at least one of an oxidizing agent and an abrasive, and

water.

Claims 21-27 (Canceled)

Claim 28 (Previously Presented): A method of making a polishing liquid composition, the method comprising

mixing water and a compound having a molecular structure in which each of two or more adjacent carbon atoms has a hydroxyl group; and

producing the polishing liquid composition of claim 1.

Claims 29-32 (Canceled)

Claims 33-37 (Not Entered)

Claims 38-39 (Canceled)

Claim 40 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer including copper or copper alloys using ~~the~~ a polishing liquid composition of claim 38 comprising

an aliphatic carboxylic acid having 7 to 10 carbon atoms and/or a salt thereof;

an etching agent comprising an organic acid; and

water, wherein

the organic acid of the etching agent is at least one selected from the group consisting
of

A: aliphatic organic acids selected from the group consisting of formic acid, propionic acid, tricarballic acid, 2-hydroxypropionic acid, gluconic acid, and amino acids;

B: aromatic organic acids having 7 to 10 carbon atoms and one to four carboxyl groups; and

D: polyaminocarboxylic acids having in a molecule two or more structures represented by the formula (III):



Claim 41 (Currently Amended): A method of using a polishing liquid composition, the method comprising polishing a surface comprising an insulating layer and a metal layer including copper or copper alloys using ~~the~~ a polishing liquid composition of claim 39

comprising

an aliphatic carboxylic acid having 7 to 10 carbon atoms and/or a salt thereof;

an etching agent comprising an organic acid;

at least one of an oxidizing agent and an abrasive; and

water, wherein

the organic acid of the etching agent is at least one selected from the group consisting of

A: aliphatic organic acids selected from the group consisting of formic acid, propionic acid, tricarballic acid, 2-hydroxypropionic acid, gluconic acid, and amino acids;

B: aromatic organic acids having 7 to 10 carbon atoms and one to four carboxyl groups; and

D: polyaminocarboxylic acids having in a molecule two or more structures represented by the formula (III):



Claim 42 (Canceled)

Claim 43 (New): The polishing compound according to claim 1, wherein the compound having a structure in which each of two or more adjacent carbon atoms has a hydroxyl group in a molecule is selected from the group consisting of 1,2-heptanediol, 1,2-hexanediol, 1,2-octanediol, 1,2,3-hexanetriol, 1,2,6-hexanetriol, 1,2,3-heptanetriol, glyceryl ethers, monoglycerides, partially esterified products prepared by carrying out an esterification reaction of gluconic acid with an alcohol, compounds prepared by reacting glycidol with a monoalkylamine or a dialkylamine, diesters of tartaric acid, and 1,2-cyclohexanediol.

Claims 44 (New): The method according to claim 15, wherein the etching agent is at least one compound selected from the group consisting of glycolic acid, gluconic acid, citric acid, and aminotri(methylene-phosphonic acid).

Claim 45 (New): The method according to claim 16, wherein the etching agent is at least one compound selected from the group consisting of

- A: aliphatic organic acids having 6 or less carbon atoms and one to three carboxyl groups;
- B: aromatic organic acids having 7 to 10 carbon atoms and one to four carboxyl groups;
- C: organic acids having 6 or less carbon atoms and one to four phosphonic groups; and
- D: polyaminocarboxylic acids having in a molecule two or more structures represented by the formula (III):



Claim 46 (New): The method according to claim 45, wherein the etching agent is at least one compound selected from the group consisting of glycolic acid, gluconic acid, citric acid, and aminotri(methylene-phosphonic acid).

Claim 47 (New): The method according to claim 16, wherein R^3 is a linear or branched, alkyl or alkenyl group having 5 to 14 carbon atoms.

Claim 48 (New): The method according to claim 20, wherein the polishing liquid composition comprises the abrasive.